Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled)

Claim 2 (currently amended): The system according to claim [[1]] 17, wherein the scan module is structured to perform block mode scanning.

Claim 3 (currently amended): The system according to claim [[1]] 17, wherein the graphic primitive is a triangle, and wherein the representative values are at least one edge function of the triangle and slope values for at least one vertex of the triangle.

Claim 4 (currently amended): The system according to claim [[1]] 17, wherein the graphic primitive is a triangle, and wherein the representative values are at least one edge function of a longest side of the triangle and slope values for at least one vertex of the triangle.

Claim 5 (currently amended): The system according to claim 4, wherein the scan module is structured to check a next adjacent pixel while processing a current pixel to determine[[d]] if the next adjacent pixel is inside the triangle.

Claim 6 (currently amended): [[The]] A system ~~according to claim 1, wherein the scan module comprises~~ for traversing and rendering a graphic primitive, comprising:

a setup engine that outputs representative values of a graphic primitive;

a raster engine that receives the representative values of the graphic primitive and forms therefrom representative pixels, the raster engine having at least a scan module that scans only pixels within the graphic primitive and assigns data values to each of the pixels and a look-ahead module that identifies pixels that are inside of the primitive;

wherein the scan module includes:

first and second registers for storing the x and y slope data, respectively for a predetermined current pixel in the triangle,

a first multiplexer having inputs connected to outputs of the first and second registers, and having an output;

an adder having first and second inputs and having an output, the first input of the adder being connected to the output of the first multiplexer;

a third register for receiving a characteristic value for the predetermined pixel, the third register having an input and an output;

a second multiplexer having first and second inputs and an output, the first input of the second multiplexer connected to the output of the third register, and the output of the second multiplexer connected to the second input of the adder;

a third multiplexer having first and second inputs and an output, the first input of the third multiplexer connected to setup engine data and the second input connected to the output of the adder, and the output of the third multiplexer connected to the input of the third register;

a fourth multiplexer having first and second inputs and an output, the first input connected to the output of the third register;

a fourth register having an input connected to the output of the fourth multiplexer, and having an output connected to the second input of the second multiplexer, the output of the fourth register also connected to the second input of the fourth multiplexer.

Claim 7 (original): The system according to claim 6, wherein the third register stores a data value for the current pixel, and wherein the fourth register stores a data value for a next pixel that is inside the triangle.

Claim 8 (original): The system according to claim 6, wherein the data value is one of a color value and a texture value.

Claim 9 (canceled)

Claim 10 (currently amended): The method according to claim [[9]] 20, wherein the method performs block mode scanning.

Claim 11 (currently amended): The method according to claim [[9]] 20, wherein the graphic primitive is a triangle, and wherein the representative values of the primitive are at least one edge function of the triangle and slope values for at least one vertex of the triangle.

Claim 12 (currently amended): The method according to claim [[9]] 20, wherein the graphic primitive is a triangle, and wherein the representative values of the graphic primitive are at least one edge function of a longest side of the triangle and slope values for at least one vertex of the triangle.

Claim 13 (canceled)

Claim 14 (currently amended): The system according to claim [[13]] 21, wherein a data value is assigned to a current pixel within the triangular primitive, and a data value is saved for a next pixel within the triangular primitive only when the next primitive is within the triangular primitive.

Claim 15 (currently amended): The system according to claim [[13]] 21, wherein data values are assigned only to pixels within the triangular primitive and never to pixels outside of the triangular primitive.

Claim 16 (currently amended): The system according to claim [[13]] 21, wherein the second module forms a plurality of data values for each pixel.

Claim 17 (new): A system for traversing and rendering a graphic primitive, comprising:

a setup engine that outputs representative values of a graphic primitive; and

a raster engine that receives the representative values of the graphic primitive and forms therefrom representative pixels, the raster engine having at least a scan module that scans only pixels within the graphic primitive and assigns data values to each of the pixels and a look-ahead module that identifies pixels that are inside of the primitive;

wherein the look-ahead module processes successive pixels one at a time using edge functions to determine whether a next pixel is within the graphic primitive; and

wherein the scan module scans a pixel previously identified as being within the graphic primitive while the look-ahead module processes the next pixel.

Claim 18 (new): The system according to claim 17, wherein each edge function is associated with one particular edge of the graphic primitive and determines whether or not the next pixel in the horizontal direction is within the graphic primitive with respect to the one particular edge.

Claim 19 (new): The system according to claim 18, wherein each edge function returns a positive result if the next pixel is within the graphic primitive with respect to the one particular edge.

Claim 20 (new): A method in a graphics system for traversing and rendering a graphic primitive, comprising:

determining representative values of a graphic primitive;

determining, successively, from the representative values of the primitive data values for each pixel of a set of pixels that are inside of the triangle, and, for each current pixel of the set of pixels inside of the triangle, looking ahead to a next adjacent pixel to determined if the next adjacent pixel is inside of the triangle using edge functions;

storing a characteristic value for the next adjacent pixel when the next adjacent pixel is inside the triangle; and

scanning the current pixel while looking ahead to a next adjacent pixel to determined using edge functions if the next adjacent pixel is inside of the triangle.

Claim 21 (new): A graphics system, comprising:

at least one graphic triangular primitive;

a first module that generates edge functions for the primitive and that provides indication of which of the edge functions corresponds to a longest side of the triangular primitive, and that provides starting coordinates for the triangular primitive;

a second module that forms pixels using the edge functions of the primitive and that provides at least one data value for each pixel; and

a third module that, successively, from a successive current pixel, determines if a next pixel is within the triangular primitive, the third module only storing a data value of the next pixel when the next pixel is inside of the triangular primitive.